Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for the production of a plurality of optoelectronic semiconductor chips each having a plurality of structural elements with respectively at least one semiconductor layer, the method comprising the steps of:

providing a chip composite base having a substrate and a growth surface;

growing a non-closed mask material layer onto the growth surface in such a way that the mask material layer has a plurality of statistically distributed windows having varying forms and/or opening areas, a mask material being chosen in such a way that a semiconductor material of the semiconductor layer that is to be grown in a later method step essentially cannot grow on said mask material or can grow in a substantially worse manner in comparison with the growth surface;

essentially simultaneously growing semiconductor layers on regions of the growth surface that lie within the windows; and

singulating the chip composite base with applied material to form semiconductor chips each having the plural structural elements arranged alongside one another, the structural elements comprising a semiconductor layer sequence.

2. (Original) The method as claimed in claim 1, in which the chip composite base has at least one semiconductor layer grown epitaxially onto the substrate and the growth surface is a surface on that side of the epitaxially grown semiconductor layer which is remote from the substrate.

3. (Previously Presented) The method as claimed in claim 1, in which the chip composite base has a semiconductor layer sequence grown epitaxially onto the substrate with an active zone that emits electromagnetic radiation, and the growth surface is a surface on that side of the semiconductor layer sequence which is remote from the substrate.

4. (Previously Presented) The method as claimed in claim 1, in which the structural elements respectively have an epitaxially grown semiconductor layer sequence with an active zone that emits electromagnetic radiation.

5. (Previously Presented) The method as claimed in claim 1, in which the mask material has SiO_2, Si_xN_y or Al_2O_3.

6. (Previously Presented) The method as claimed in claim 1, in which, after the growth of the semiconductor layers, a layer made of electrically conductive contact material that is transmissive to an electromagnetic radiation emitted by the active zone is applied to the semiconductor layers, so that semiconductor layers of a plurality of structural elements are electrically conductively connected to one another by the contact material.

7. (Previously Presented) The method as claimed in claim 1, in which the average thickness of the mask material layer is less than the cumulated thickness of the semiconductor layers of a structural element.

8. (Previously Presented) The method as claimed in claim 1, in which the mask material layer is at least partly removed after the growth of the semiconductor layers.

9. (Previously Presented) The method as claimed in claim 1, in which, after the growth of the semiconductor layer sequences, a planarization layer is applied over the growth surface.

10. (Original) The method as claimed in claim 9, in which a material whose refractive index is lower than that of the semiconductor layers is chosen for the planarization layer.

11. (Previously Presented) The method as claimed in claim 9, in which a material which has dielectric properties is chosen for the planarization layer.

12. (Previously Presented) The method as claimed in claim 1, in which the growth conditions for the growth of the mask material layer are set in such a way that three-dimensional growth is predominant and the mask material layer is predominantly formed from a plurality of three-dimensionally growing crystallites.

13. (Previously Presented) The method as claimed in claim 1, in which the growth conditions for the growth of the mask material layer are set in such a way that two-dimensional growth is predominant and the mask material layer is predominantly formed from a plurality of two-dimensionally accreting partial layers.

14. (Previously Presented) The method as claimed in claim 1, in which the growth conditions for the growth of the mask material layer are set in such a way that most of the windows are formed with an average propagation of the order of magnitude of micrometers.

15. (Previously Presented) The method as claimed in claim 1, in which the growth conditions for the growth of the mask material layer are set in such a way that most of the windows are formed with an average extent of less than or equal to 1 μm.

16. (Currently Amended) The method as claimed in claim 1, in which the growth conditions for the growth of the semiconductor layers are set and/or varied during growth in such a way that semiconductor layers of the structural elements at least approximately ~~form a lenslike~~ define a curved form.

17. (Previously Presented) The method as claimed in claim 1, in which the mask material layer and the semiconductor layers are grown by means of metal organic vapor phase epitaxy.

18. (Withdrawn) An optoelectronic semiconductor chip, characterized in that it is produced according to a method as claimed in claim 1.